ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: August 23, 1982

TO: Al Keller, [illegible]

FROM: Ed Marek, [illegible], Maywood EM

SUBJECT: MSD Hanover Park -Fisher Farm Sludge
Permit Renewal Application

This memo is in response to your July 28, 1982 request for a field visit to acquire certain information relating to MSD Hanover Park sludge management operations. The field visit was made on August 17, 1982 with Frank Yumping of our Field Operations Section. We conferred with Gordon Sernel, Plant Manager, Jim Olsta, CE II Associate and John Bezaitis, Assistant Chief Engineer.

The following comments follow your numbering sequence and are being forwarded as a supplement to plant data and other comments previously forwarded to you.

1) The cornfield ridge and furrow system has been successfully carried out since 1979. In certain areas residential homes are across the street from the cornfields, however, a check with an Administrative Assistant (Mark Masciola) of the Village of Hanover Park confirmed that complaints have been minimal and those that have been received have been responded to favorably by MSD. Most of the complaints registered were received during 1981 when the two sludge storage lagoons were cleaned and the removed material transported by truck to the cornfields. This included crossing a Village Street (Walnut Avenue) and some sludge spillage onto the roadway had occurred.

It was noted that the current method of releasing & closing off liquid sludge into the furrows results in an accumulation of sludge at the low end of the cornfield which could be a source of odors. FOS will discuss an alternate method with the Plant Manager whereby a set time interval can be incorporated when releasing liquid sludge to eliminate or reduce sludge accumulations at the far end. (This was discussed briefly with Ray Rimkus of Maintenance and Operation on August 19, 1982.)

The West Branch of the DuPage River travels through the plant grounds and the sludge application to cornfield area. The berms which separate the 16 fields are quite substantial and have not allowed leakage to the River. The top of each berm is used as a roadway to travel from field to field. Olsta advised that the District performs dye tests every 6 months to assure that the piping system is not leaking to the River.

2) All fields are bermed and underdrained and all runoff and leachate is pumped to the head end of the sewage treatment plant. The attached pump curves indicates that a flow of about 1700 gallons per minute is returned when all four pumps are operating. Each pump (two in the east sumphouse and two in the west sumphouse) is rated at 900 gallons per minute.

3) You have requested and received analytical data for recycle drainage flow for 1980, 1981 and 1982 from MSD. Frank Yumping's Final Grant Payment Inspection Report which was sent to you contains additional return flow data.

There is provision at each pumphouse for manually controlled overflow to the receiving stream. According to MSD, no overflows have occurred.

The design average flow of the sewage treatment plant is 12 MGD. Current flow is about 7 MGD. Flows in excess of only 14 MGD, due to problems with certain of the tertiary sand filters, are diverted to four large oxidation lagoons which have provision for manually controlled overflow to the receiving stream. According to MSD, no overflow from the lagoon system has taken place. Improvement to the tertiary sand filters is expected to increase tertiary treatment capability to 20 MGD.

Provision has been made for pumping runoff flows to the sludge storage lagoons in the event the level of the four oxidation lagoons becomes too high.

4) Sludge generated at the sewage treatment plant is about 3 dry tons per day. The ridge and furrow system is the only system used during the corn growing season. During the colder months, anaerobically digested sludge is stored in the two sludge lagoons. No other outside source of sludge is brought to the Hanover facility for disposal.

5) Sludge is distributed to the fields through a gated system in a liquid state. No drying or vehicle agitation takes place. Sludge is surface applied by means of the ridge and furrow system, however, all of the cornfields are disked in the spring prior to planting.

Other general comments we discussed by telephone on August 18, 1982 include:

A) A new plating company located in Hanover Park in 1981 and has a Cd discharge.

B) The renewal permit should indicate the parameters to be monitored and the once a week frequency.

C) The renewal permit should clarify the monitoring report procedure including information as to where to send.

D) One permit should encompass all sludge management operations (the experimental farm does not appear to be included in the application, however, this area is not in use.)

E) There will be a gradual phase out - phase in from cornfield to nursery. Is it necessary to know what their actual scheduling will be?

F) Random digested sludge samples should be collected by FOS in the future for heavy metal and other analyses. This will be discussed with Ted Denning.

G) The #6 monitoring well was returned to service late in 1981. (Wells 5, 7, & 8 are also in operation).

H) The monitoring program terminates in Oct. although sludge application continues into Dec. The renewed permit should establish the monitoring period.

I) Continual recording charts are retained which indicate the drop in wet well levels versus time of pumping at each sumphouse, however, no calculations of return flow rates are made. Quantity and quality of the return flows should be reported regularly.

ELM:gkw

CC - Tom Wallin, Manager, Quality
Assurance Unit, Springfield
- FCY
- ELM
- TMD

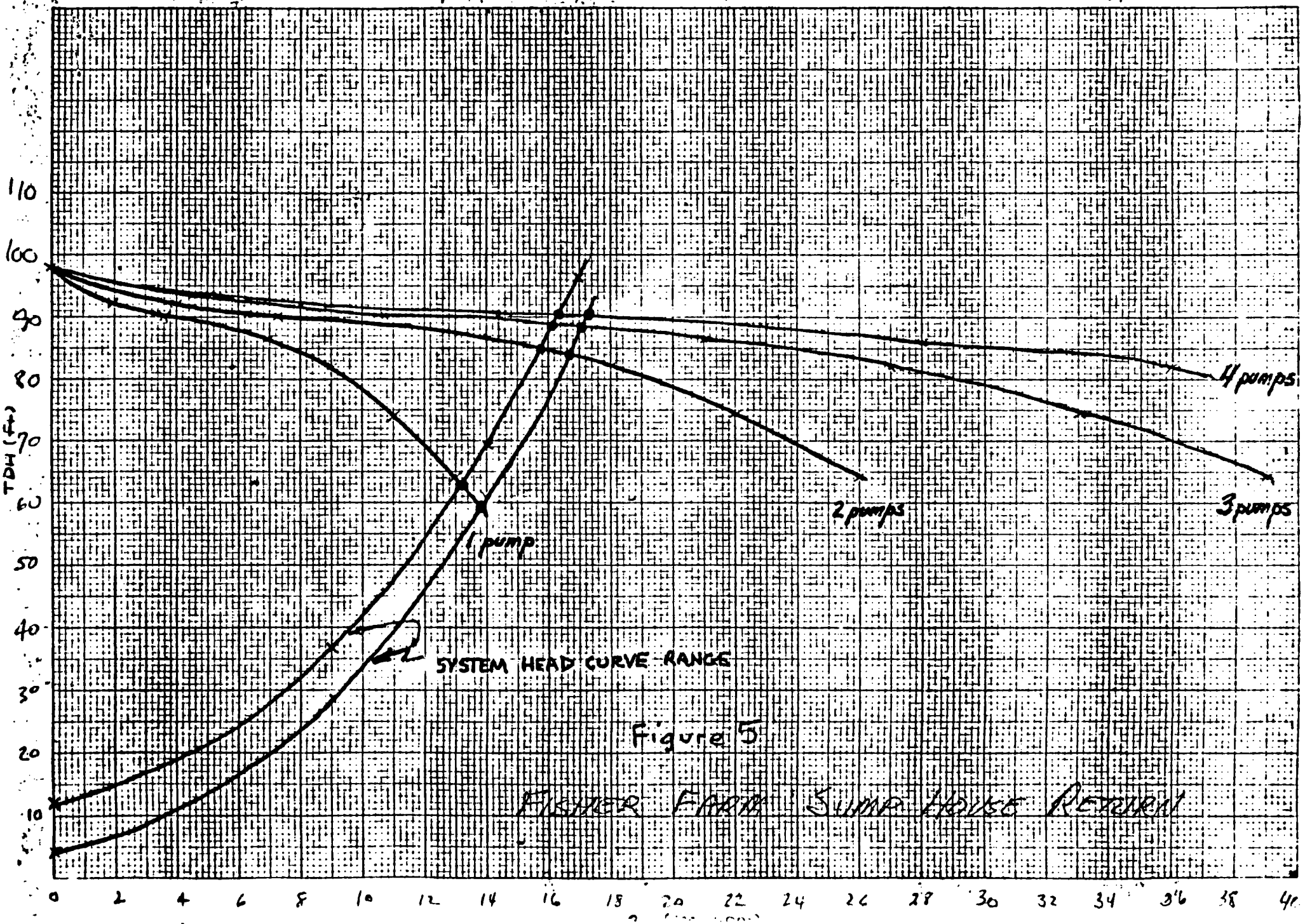

Figure 5

Fisher Farm Sump House Return